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**From:** EPAResearchCompass [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C1E8F11508674C3C954553A1129D33E5-EPARESEARCH]  
**Sent:** 4/17/2018 3:52:04 PM  
**To:** ORD-ALL Feds and NonFeds and RSLs [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2c735272eef941588aefd9a05ed28823-ORD-ALL Feds and NonFeds and RSLs]  
**CC:** Carter, Bobbi [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f16dcafe85fc418ebd1651be2e8ab82d-Carter, Bobbi]; Barnett, Felicia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5773b45cae5142fe950861dd6146f1e9-Barnett, Felicia]; Lincoln, Larry [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8248d03a1441414db7754db201ebec45-Lincoln, Larry]; Liljegren, Jennifer [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c7098a838cd34f75b8878571fe95d939-JLiljegr]; Taylor, Dawn [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b984d00ec06544e498ee5d986f97047c-Taylor, Dawn]; Gettle, Jeaneanne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d8e72aa7e1894faea44006fd9f22b637-Gettle, Jeaneanne]; Klinger, Adam [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=346d5466632f4967adc7169c8d2ce4fd-Klinger, Adam]; Fan, Shirley [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=cdeba1df9599435cb7401d0a65be7cda-Sfan02]; Pollard, Solomon [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=16cdf700f8024145847a2770b84abae3-Pollard, Solomon]; Clarage, Meredith [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ee9504437be545489f518710a5e80e68-Clarage, Meredith]  
**Subject:** Weekly Compass: April 17, 2018



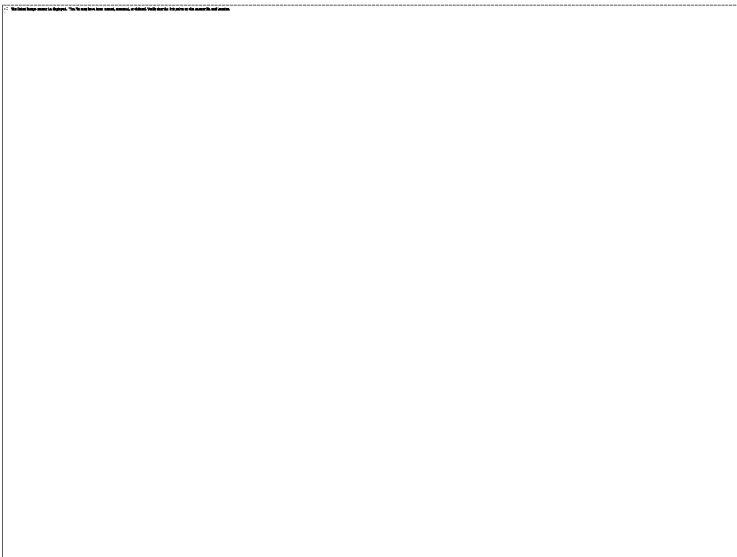
Weekly Update: 4/17/2018

Welcome to the Weekly Compass, your gateway to information about recent and upcoming ORD activities. If you have ideas for the Weekly Compass, please send them to the editors. To see past issues, visit the Weekly Compass archive on [ORD@work](mailto:ORD@work).

## Weekly Note from Jennifer

ORDers- Last week Chris Robbins and I attended the Agency's Executive Management Council meeting. During the meeting, Henry Darwin, EPA's Chief of Operations, spent a couple of hours talking about our expected next steps to implement EPA's Lean Management System. Also at the meeting, Hayley Hughes, the new lead for lead in the Agency was introduced. OW provided an update on the planning for the National Leadership Summit to Take Action on PFAS in May. This week, ORD will convene our monthly business review on Wednesday and our Executive Council (EC) will meet on Thursday. The EC will discuss a number of topics, including our progress on developing the Strategic Research Action Plans and options to create a more efficient research organization.

Yesterday, Administrator Scott Pruitt visited Cincinnati to meet with local water utilities and tour two local lead service line replacement construction sites as well as ORD's lab there. During a roundtable discussion with Greater Cincinnati Water Works (GCWW), Administrator Pruitt discussed EPA's continued cooperation with GCWW, including evaluating treatment technologies for PFAS removal and the development of drinking water security tools, all with the goal of eradicating lead in drinking water and providing the highest water quality. Following the discussion, Administrator Pruitt and leaders from GCWW visited two different lead service line replacement construction sites. Finally, Administrator Pruitt visited EPA's Cincinnati ORD research lab, where he received an update on the research being conducted on drinking water pipe corrosion and its impact on water quality, as well as a tour of the drinking water pilot plant, which focuses on PFAS removal and drinking and ground water treatment. *-Jennifer*



L to R: Tom Speth, Administrator Pruitt, and Cindy Sonich-Mullin

## Quick Updates

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- [Check out](#) what ORD has planned for Earth Month! And [click here](#) to see all the outreach or service opportunities around ORD locations and who to contact if you want to volunteer to help out!
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- Apply to be an Embassy Science Fellow <https://intranet.ord.epa.gov/osp/2018-embassy-science-fellows-announcement> by April 30!
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- Check out the [current EPA GRIP opportunities](#). Please contact Jayne Michaud to add an EPA GRIP project.
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- [The FY18 Regional Research Partnership Program \(R2P2\)](#) selections have been made!
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- *[No Fear Act Training](#) is now available, training must be done by September 30*
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- *[Read the internal spring edition of the Air and Energy Research News](#)*
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- Don't forget to [check out the open opportunities on Talent Hub!](#)
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- You can read the [This Week @ EPA newsletter here](#).
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- Upcoming webinars:
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  - [Introduction to PDF Accessibility](#): Tuesday, April 17, 1-3 ET
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  - [A-E Connections Call](#): Wednesday, April 18, 11:30-12:30 ET
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  - [HEI Webinar: Did Power Plant and Motor Vehicle Controls Improve Air Quality and Health in Atlanta?](#): Thursday, April 19, 1 pm ET
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  - [CSS Science Seminar Series: CSS Science Webinar Series: HIGH-THROUGHPUT TRANSCRIPTOMICS \(HTTr\)](#): Tuesday, April 24, 2018, 1- 2 ET
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  - [Small systems webinar on Simultaneous Compliance: Considerations for adjusting Treatment](#): Tuesday, April 24 from 2:00-3:30 pm
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  - [CompTox Communities of Practice: Host-Associated Microbiota Modifies the Toxicity of Environmental Chemicals in Zebrafish](#): Thursday, April 26, 11 am-12 pm ET
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- [Air and Energy Webinar: Emerging Sensor Technologies 2014-2018 Progress Report: Monday, April 30 at 8:30-11:30 am ET and 1:30-4:30 pm ET](#)
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- [EPA Tools and Resources Webinar: Multi-media modeling of lead exposure in children and water lead monitoring research to inform public health decisions: Thursday, April 30, 3-4 pm ET](#)

## Photos of the Week: P3

## In the Lab:

### PFAS Research Discussion

Yesterday, NCCT, NERL, NHEERL and NCEA scientists met with OLEM and OW to discuss the future of PFAS toxicity assessment research. This future research includes mapping available PFAS data and looking at ways to move beyond chemical-by-chemical assessment, filling in data gaps, and developing tools to enable states and regions to make decisions to better protect health and the environment.

### Meeting with Unilever

This week, NCCT scientists Josh Harrill, Imran Shah, and Richard Judson will attend a meeting at the Unilever Safety and Environmental Assurance Center (SEAC) as part of the Cooperative Research and Development Agreement (CRADA) between Unilever and NCCT. Through the agreement, NCCT and Unilever have selected a handful of case study chemicals to determine how NCCT's new non-animal approaches to evaluating chemicals can be used by Unilever to assess common chemicals in their products. NCCT will present research on developments in read-across modeling as well as results from the testing of the case study chemicals in a portfolio of high-throughput in vitro assays. Unilever will discuss their predictive toxicity and exposure modeling efforts for the case-study chemicals.

### Meeting with the Netherlands

Tomorrow, NCCT and NERL will meet with representatives from the Netherlands' National Institute for Public Health and the Environment (RIVM) to discuss a potential collaboration between the two organizations. The overarching goal of the collaboration would be to share chemical data and work together on the next generation of risk assessment, potentially involving research on reducing animal testing, human relevance, mixtures, toxicokinetics, and exposure assessment. More information on RIVM is available [here](#).

## Helping Develop New Ways to Monitor Air Quality During Fire Events

Earlier this month, NHEERL concluded its assistance to NERL in the Phase I testing activity of the Wildland Fire Sensors Challenge. This challenge seeks a field-ready prototype system capable of measuring constituents of smoke, including particulates, carbon monoxide, ozone, and carbon dioxide, over the wide range of levels expected during wildland fires. The testing used state-of-the-art exposure systems at NHEERL's Clinical Studies Facility (CSF) in Chapel Hill, North Carolina, that is designed to study the health effects of airborne pollutants. The unique facilities at the CSF allowed evaluation of submitted sensors under ideal "clean" conditions. Tests were run in four temperature/relative humidity conditions over different concentration ranges of PM<sub>2.5</sub>.

and gases, CO<sub>2</sub>, CO, and O<sub>3</sub>. Performance of the sensors was evaluated by comparing sensor pod measurements with EPA reference instruments under all conditions.

## **State Engagement**

Today and tomorrow, IOAA's Lisa Matthews will participate in the 2018 Interstate Technology & Regulatory Council (ITRC) Annual Meeting. Lisa will present to the State Engagement POCs about ORD's work with ECOS and the Environmental Research Institute of the States (ERIS), including state research needs and plans to engage states in the development of ORD's Strategic Research Action Plans refresh. This meeting provides an opportunity to learn from states and ITRC projects teams, including efforts on PFAS and stormwater BMP pollution-reduction, and identify new potential opportunities for ORD to collaborate with ITRC. Later this week, Lisa Matthews will attend the E-Enterprise Leadership Council Meeting in Chicago. The Advanced Monitoring project team will provide recommendations on the project's proposal for upcoming work, and the E-Enterprise Management Board will discuss key highlights across projects and the use of huddle boards to ensure projects are on track moving forward.

## **NAS IRIS Briefing on *Review of Advances Made to the IRIS Process: A Workshop***

Last week, an NAS Committee briefed EPA on the findings of a consensus report, *Review of Advances Made to the IRIS Process: A Workshop*. The report was released to the public after congressional briefings. The NAS Committee is encouraged by the steps that EPA has taken, which have accelerated during the last year under new leadership. It is clear that EPA has been responsive and has made substantial progress in implementing National Academies recommendations.

## **NHSRC Advises DHS/USDA SBIR-Funded Vehicle Decontamination Tunnel**

During a wide-spread animal disease outbreak or after a wide-area biological attack, a major way pathogens are likely to spread is from the movement of contaminated vehicles involved in the response. Therefore, we must have effective, portable, scalable technologies to decontaminate vehicles to minimize contaminant spread and to keep vehicles operational. In March, the final demonstration of a non-freezing, portable vehicle wash-tunnel was conducted in Huntsville, AL by DHS/USDA SBIR-funded Integrated Solutions for Systems, Inc. NHSRC has provided critical input to the project since its inception in 2012. USDA and DoD representatives were also present at the demonstration and expressed interest in further enhancement of the tunnel for their respective Agency-specific missions. More information can be found in this [2015 DHS article](#).

## **Pathfinder Innovation Projects Proposals Due May 25**

Pathfinder Innovation Projects (PIPs) provide an opportunity for researchers to pursue high risk, high reward endeavors that provide novel and transformative solutions to our most pressing human health and environmental challenges. Over the last six years, more than 80 novel projects have been piloted by the PIP program, leading to publications, patents, new tools and methods. With this year's seventh round of PIPs, innovative solutions are encouraged that address one of EPA's current priorities to (1) monitor and measure emerging contaminants (e.g., PFAS) or high priority hazards (e.g., lead), (2) accelerate Superfund site assessment and remediation, (3) strengthen the science basis for TSCA implementation, and (4) facilitate the attainment of air quality standards. This year, proposals can be submitted for smaller projects (up to \$49k) or larger, more ambitious projects (up to \$100k). Start brainstorming with your colleagues, refine your ideas, and then send us the best. [This is your chance to compete for funding and research time to explore and test your boldest ideas.](#) Contact Rebecca Dodder (Dodder.Rebecca@epa.gov /919-541-5376) with questions or concerns. Rebecca is also

available to join your staff meetings to chat about PIPs, brainstorm, and answer questions – please take the opportunity to invite her.

## **EPA Releases Manual to Help External Stakeholders Use Data Related to Chemical Screening**

ORD has used rapid and efficient methods, called high-throughput screening, to test thousands of chemicals for potential health effects. This work has resulted in the public release of hazard data on ~1,800 chemicals. External stakeholders have requested a more detailed understanding regarding the selection of chemicals used in the testing, the assays used in the screening process, data analysis approaches used by NCCT in analyzing the data and evaluating its quality, and how to access and explore the data. In response to this feedback, NCCT released an online owner's manual this week to help external stakeholders navigate and use this large source of data. More information about the owner manual is available [here](#).

## **Wilmington, North Carolina Community Meeting on GenX Results**

Yesterday, NC State University's Center for Human Health and the Environment hosted a community meeting in Wilmington, NC. The purpose of the meeting was to discuss the water results from the GenX exposure study. ORD scientists attended the meeting to address and discuss their approach and the results from the Cape Fear River study. This study was a collaborative effort led by North Carolina Department of Environmental Quality (NC DEQ). In 2017, ORD reported the results of their analyses for this study to NC DEQ in a series of reports.

## **State of Tennessee Meeting**

Tomorrow, ORD and the OAQPS will meet with scientists from the Tennessee Department of Environment & Conservation and Tennessee Department of Health to discuss the results of an ongoing pilot project using U.S. EPA's Environmental Benefits Mapping and Analysis examining the health benefits of historical reductions of O3 precursors in Tennessee.

## **Region 5 State PFAS Meeting**

Tomorrow, ORD will join Region 5 for a meeting with their State Directors, discussing ongoing EPA research related to PFAS. There will be discussion of state R&D needs, interests and priorities regarding PFAS. States in Region 5 have many PFAS related activities underway at the moment including analysis and cleanups at several Superfund sites and problems with PFAS-related foam on lakes.

## **National Atmospheric Deposition Program (NADP) Meeting**

This week, NRMRL's John Walker is the [meeting](#) co-chair and a member of the steering panel for the Total Deposition Science Committee under [NADP](#). SSWR's Anne Rea will also be participating in the meeting. The spring meeting is an opportunity for the various NADP science committees to conduct business, exchange scientific results on ongoing projects, and discuss and plan outreach activities for next year. Attendees include representatives from U.S. Geological Survey, National Park Service, U.S. Forestry Service, National Oceanic and Atmospheric Administration, and academia. John is working with a collaborator from OAR's Clean Air Markets Division to develop a white paper documenting the state-of-the-science of total deposition budgets for reactive nitrogen in North America.

## **Petroleum Vapor Intrusion Workshop for Utah Department of Environmental Quality, Salt Lake City**

Today, NRMRL's Jim Weaver will give a workshop on petroleum vapor intrusion (PVI) and the [PVIScreen model](#) to the Utah Department of Environmental Quality. PVIScreen is an EPA model that estimates the potential for petroleum vapors from leaking underground storage tanks to enter buildings, where they might pose risk to the health of occupants. Jim will also assist the

state in applying the model to sites where the threat of vapor intrusion potentially impedes site closure decisions.

### **Technical assistance to Region 9 for Williams Air Force Base Superfund Site, Phoenix, AZ**

At the request of Region 9, NRMRL's Eva Davis will provide technical support on continuing remediation of a large jet fuel spill site on the former Air Force base. Representatives from Region 9, U.S. Air Force (USAF), and Arizona Department of Environmental Quality will also attend. They will discuss steam injection remediation progress at a jet fuel spill site at the Liquid Fuel Storage Facility. Eva has worked with Region 9 and USAF for over 10 years on remedy selection for the jet fuel spill, oversight of the design, and implementation of pilot- and full-scale steam injection.

### **Water Quality Laboratory Audits and Training, Accra, Ghana, April 20-May 5**

NRMRL's Mark Rodgers, Julius Enriquez, Marilyn Maycock (Region 4), and Teresa Kuklinski (OITA) will travel to Ghana to participate in:

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- an internal audit of laboratory operations for their main water quality laboratory
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- a stakeholder workshop to discuss progress of the Urban Water Quality collaborative project (project members are USAID, EPA and African Water Association)
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- a training session focused on process control monitoring at a drinking water treatment plant in Accra.

These events are part of an on-going EPA project, funded by USAID West Africa, which aims to build capacity of drinking water quality laboratories in urban areas of West Africa.

### **2018 Embassy Science Fellows Program Announcement and Informational**

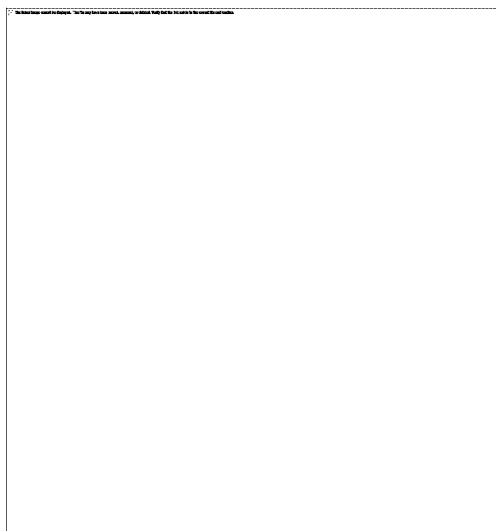
Applications from EPA scientists are currently being accepted for the 2018-2019 Embassy Science Fellows Program (**due by April 30**). The Embassy Science Fellows Program places Agency scientists at US embassies around the world for 2-4-month assignments as technical advisors on environmental science and public health issues. The Program offers career development opportunities for EPA science staff while supporting US diplomatic and scientific collaboration efforts. For more information, contact Monica Rodia at [Rodia.Monica@epa.gov](mailto:Rodia.Monica@epa.gov) and join the call on Thursday. The Embassy Science Fellows Program 2018 Kick-off Information Session: Thursday, April 19, 2-3:30 ET: 51161 RRB 5th Floor (Policyeum) or (202) 991-0477, code: 9520960

### **NERL Scientist Joins Montana Invasive Species Science Advisor Panel**

In 2017, Montana Fish, Wildlife and Parks (FWP) detected indications of invasive mussels at a reservoir through the use of environmental DNA. However, there are unanswered questions surrounding the use of DNA as a tool for early detection of invasive mussels. So, Montana Invasive Species Council, Montana FWP, and other stakeholders have formed a science advisory panel to help understand how and when to use DNA as a tool for early detection of invasive mussels. The panel includes six members with expertise in the use of DNA to detect invasive species. NERL's John Darling was invited to join the panel because of his research on applying genetic methods to understanding the spread of aquatic invasive species in order to inform risk

analyses. Darling and the other panelists will meet at a workshop this month focusing on questions related to the state of the science, sample collection methods, interpretation of results, and developing a set of recommendations for how Montana can use DNA as a tool for early detection of invasive mussels.

## EnviroAtlas Workshops



Last week, Regina Poeske (Region 3 RSL) facilitated an EnviroAtlas/EJSCREEN Training Webinar and Tools Café for Region 3 and other interested EPA staff. Jessica Daniel (NERL) presented on EnviroAtlas and a Region 3 staff member provided an EJSCREEN Training Session. The presentations demonstrated the complementary aspects of both tools by examining a case study set in the Mid-Atlantic region.

Today, the EnviroAtlas Team will host a workshop on meter-scale land cover classification. The workshop will update and train EPA GIS users who need imagery products but do not have remote sensing experience. [EPA EnviroAtlas](#) has developed Meter-scale Urban Land Cover (MULC) data for more than 25 U.S. Communities and the MULC development team will lead the workshop. The workshop will include lectures, hands-on experience classifying data, tips on data interpretation, and conversations on best practices and best use of EPA geospatial resources. The workshop's lead is NERL's Drew Pilant. Additional facilitators and instructors include NERL's Keith Endres, Dan Rosenbaum (ORISE), Gillian Gundersen, Chandra Giri, Jeremy Baynes, Annie Neale, and Jessica Daniel, and NHEERL's John Lovette and Jenna Hartley (ASPPH Environmental Health Fellow).

## Journal Article: Diluted Bitumens Degradation

NRMRL's Jorge Santo Domingo and Robyn Conmy recently co-authored a paper titled, "[Microbial Degradation of Cold Lake Blend and Western Canadian Select Dilbits Using Freshwater Enrichments](#)," in the forthcoming June issue of the *Journal of Hazardous Waste*. Dilbits, or diluted bitumens, are hydrocarbons used in petroleum-based products. Accidental dilbit spills have recently been reported. Due to potential environmental impacts, knowledge on dilbit degradation is relevant to plan remediation strategies. The paper reported on the degradation rates of several dilbit constituents at two different temperatures, and identified the bacterial populations that are likely involved in hydrocarbon degradation.

## Journal Article: Emissions from Open Burning

NRMRL's Brian Gullett co-authored an article titled, "[Characterizing emissions from open burning of military food waste and ration packaging compositions](#)," in the April issue of the *Journal of Material Cycles and Waste Management*. The article explores emissions from open burning of

military food waste and ration packaging. In response to health concerns from open burning disposal of waste, such as at military bases, researchers characterized emissions from current and prototype Meals Ready-to-Eat (MREs) and material options for their associated fiberboard packaging to assess emissions contributions of the individual components.

### **Grantee Publication on Prenatal Exposure to TRAP**

Studies suggest that prenatal exposure to traffic-related air pollution (TRAP) may contribute to childhood obesity. While exact mechanisms for this association are unknown, circulating adipokines are hypothesized to contribute to early-life weight gain. Researchers of the [NIH-EPA Environmental Health Disparities Centers program](#) at the University of Southern California recruited mother-infant pairs on the labor and delivery ward at the Los Angeles County + University of Southern California Medical Center. This study estimated prenatal residential TRAP exposure and used linear regression analysis to examine associations between adipokines with TRAP exposure and infant weight change (birth to 6 months). Findings published in the [Pediatric Obesity Journal](#) reported that a one standard deviation increase in prenatal non-freeway nitrogen oxides was associated with 33% higher leptin and 9% higher high molecular weight adiponectin levels in cord blood. Leptin levels were 71% higher in mothers who lived <75 m than those living >300 m from major roadways. A 1 standard deviation (10 ng mL<sup>-1</sup>) increase in leptin was associated with a significant increase in infant weight change in female infants but not male infants. This study may have implications for future obesity risk.

### **Grantee Publication on Persistence of Nanomaterials**

Researchers at the [Center for Environmental Implications of Nanotechnology](#), funded jointly by the EPA and NSF, have investigated the persistence of several classes of nanomaterials in realistic environmental conditions. In water column studies, nanoparticles persisted for periods ranging from 36 hours to 10 days. Heteroaggregation was the primary driving factor for nanoparticle removal from the water column, and the surface affinity, measured in the laboratory, appears to predict relative removal rates. These [results](#) indicate heteroaggregation and deposition may dominate surface chemistry in determining the rate of nanoparticle removal when the background particle concentrations (e.g., clays and organic debris) are high and or when depositional surfaces such as aquatic plants are abundant. These interactions are poorly predicted by currently prevailing benchmarks such as particle surface preparation.

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## **Accolades:**

### **Journal Article on Dispersants during Deepwater Horizon Oil Spill Featured as Editor's Choice**

A paper co-authored by NRMRL's Robyn Conmy, "Photochemical oxidation reduced the efficacy of aerial dispersants applied in response to the Deepwater Horizon oil spill," will be published in *Environmental Science & Technology Letters* and has been selected as the American Chemical Society (ACS) [Editor's Choice](#). Scientific editors of ACS journals from around the world select one new peer-reviewed research article to be made freely available every day for all to access and read.

### **American Geophysical Union Award for Excellence in Refereeing**

NERL's Havala Pye will receive the American Geophysical Union's (AGU's) 2017 Editor's Citation for Excellence in Refereeing for *Journal of Geophysical Research: Atmospheres*. This award is being given to publicly recognize Pye's consistently conscientious reviews of submitted papers. The referencing process is critical for academic, peer-reviewed

journals to maintain high standards of quality. The Journal gives this citation to recognize that Pye's reviews are particularly commendable, and are invaluable to the journal.

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## **In the News:**

### **Association Between Exposure to Wildland Fire Smoke and Heart and Stroke Related Emergency Room Visits**

A new study was published last week by the *Journal of the American Heart Association* that looked for possible associations between daily maximum smoke density and over a million hospital Emergency Department (ED) visits in northern and central California, over a five-month period in 2015 at a ZIP code level of resolution. The study found a positive association between ED diagnoses for heart, brain, blood vessel, and respiratory disease relative to days without wildland fire smoke exposure. Impacts were greatest on medium and dense smoke days, and among adults 65 years and older. This new study is one of the few to investigate cerebrovascular outcomes explicitly and to find significant associations with exposure to smoke. The publication is a product of a multi-disciplinary collaboration between NHEERL researchers, the State of California Department of Public Health, and academic partners at the University of California, San Francisco. This study demonstrates the value of collaboration in closing knowledge gaps as we meet the needs of the states. There has been significant media interest in the paper. NHEERL's Wayne Cascio and Ana Rappold did interviews with *HealthDay*, *TCTMD's the heartbeat* the *San Jose Mercury News*, *MedPage* and several other outlets. Congratulations to Wayne Cascio and Ana Rappold for all of the media interest in their JAHA paper that was published this week!

### **Article on Nutrient Sensor Action Challenge**

OSA's Denice Shaw was interviewed about the Nutrient Sensor Action Challenge. The article ran last week in *Environmental Monitor*.

### **EPA Research Highlights Column Features SHC's R2R2R Work**

The April 2018 issue of EM Magazine, a copyrighted publication of the Air & Waste Management Association, highlights SHC's ongoing support for contaminated site cleanup and community revitalization in the St. Louis River estuary, an R2R2R—for remediation to restoration to revitalization—project. The "EPA Research Highlight" column illustrates how SHC is working directly with local communities in support of the Administrator's priorities of cooperative federalism, Superfund cleanup, and community revitalization. The article is available at: <http://pubs.awma.org/flip/EM-Apr-2018/epareshighlights.pdf>.

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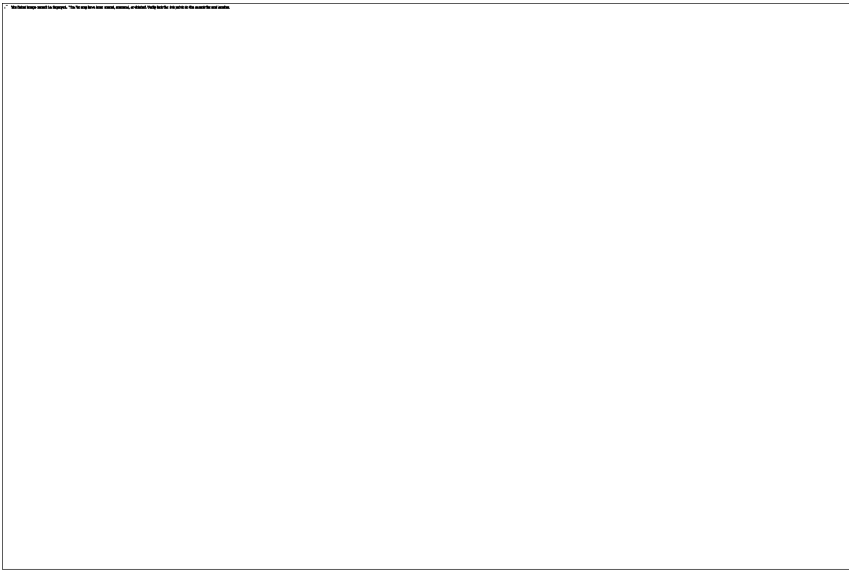
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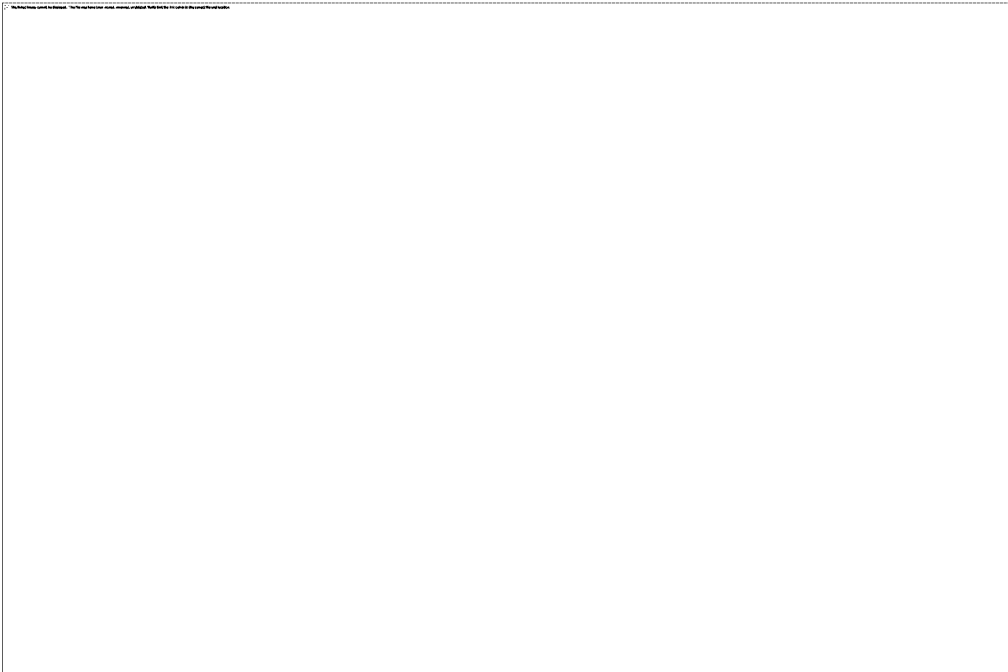
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### **Photos of the Week: P3**

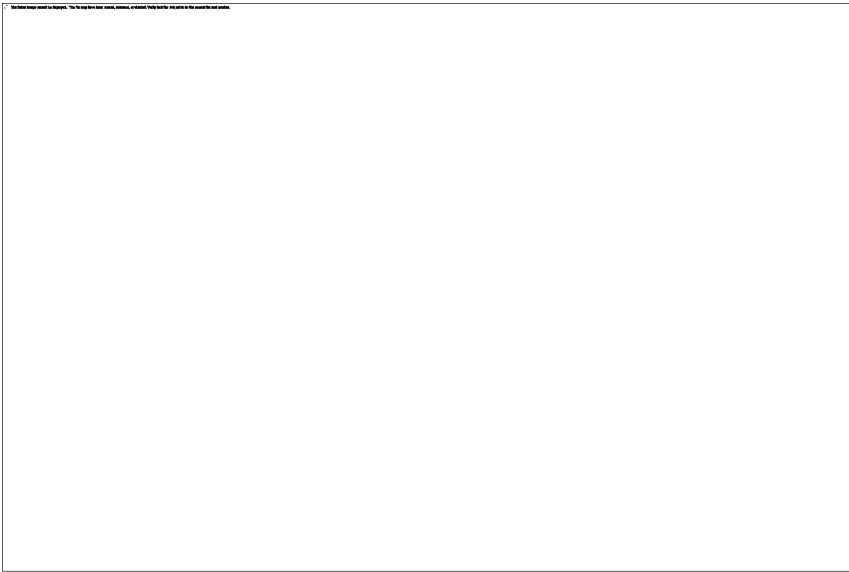
April 7-8, the P3 grantee college teams came to Washington, DC to exhibit their projects in conjunction with the USA Science and Engineering Festival.



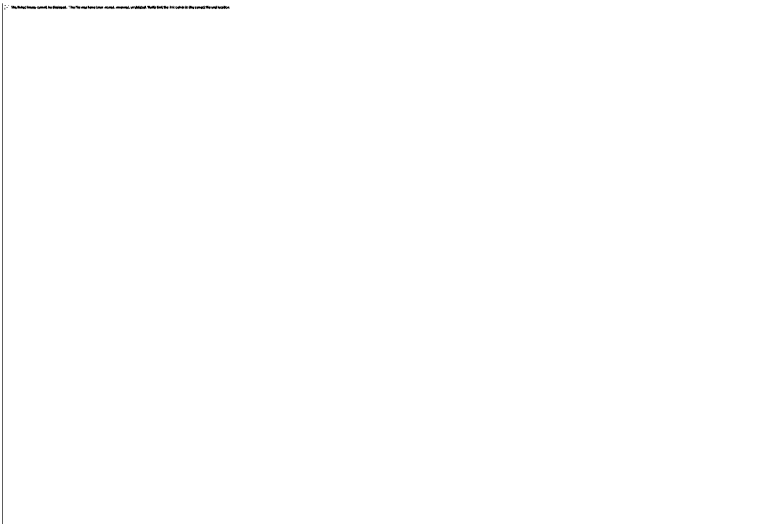
Richard Yamada chats with a P3 team



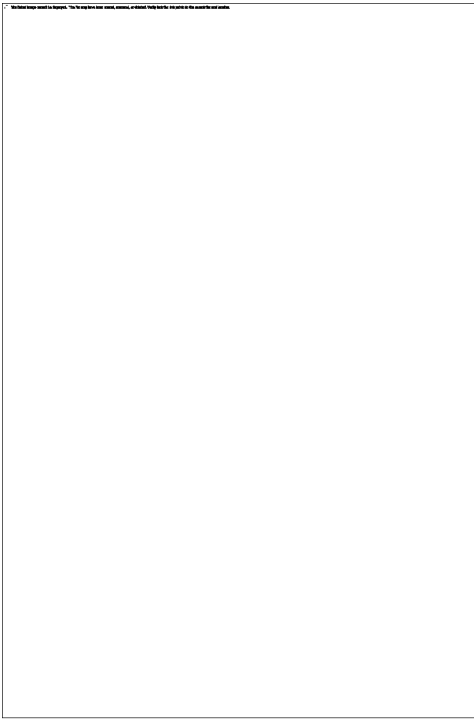
Richard Yamada gives remarks at P3



OSP’s Fred Hauchman gives remarks at P3



NCER's Acting Deputy Director James Gentry gives remarks to the P3 students



A P3 grantee explains his project to Maryellen Radzikowski